

Abstract

A sensor for the detection of an analyte, comprising a holographic element comprising a medium and a hologram disposed throughout the volume of the medium, wherein an optical characteristic of the hologram changes as a result of a variation of a physical property occurring throughout the volume of the medium, wherein the medium is obtainable by formation *in situ* in the presence of a pore-forming agent, wherein the agent is not present in the sensor or does not react with the analyte and the sensor.